REMARKS

This amendment is in response to the Official Action mailed October 6, 2003.

In the present paper, claims 1, 3, 11 and 17 have been amended, and claims 2 and 13 have been canceled. Claims 1, 3-12 and 14-20 are presently presented for the Examiner's consideration in view of the following remarks:

The Present Application

The present application is directed to a system and method for indexing voice mail messages according to the identity of the caller. A server analyzes voice data in the message and matches it to speaker models that have been established based on previous voice mail messages.

One feature of the invention is the technique used to create the speaker models. The inventors have recognized that a voice mail subscriber is in a unique position to initially identify a caller associated with a given voice message. The subscriber often recognizes the spoken voice in the message. Furthermore, the subscriber must listen to the message at some point, and so will hear the caller's name if she announces herself. Finally, a subscriber may determine a caller's identity from the message context, even if the caller is unfamiliar and does not announce herself.

By using information from the subscriber to identify an unknown caller, the inventors have created a simple and highly reliable alternative or supplement to other, more "high-tech" approaches such as using caller ID, or prompting an unknown caller to identify himself, or extracting the caller identification from a speech-to-text conversion of the message.

The independent claims have been amended to incorporate that feature, which had been found in canceled dependent claims 2 and 13. Exemplary claim 1, as amended, is directed to a method for indexing voice mail messages. One or more voice mail messages are received from

one or more callers, and speech signals from each of the voice mail messages are processed with one or more caller speaker models. The identity of each of the one or more callers in each of the one or more voice mail messages is determined. Each of the voice mail messages is then tagged with the respective identity of the caller for each respective voice mail message. A speaker label is received from a voice mail subscriber for a voice mail message tagged as unknown, wherein the speaker label is the identity of the speaker of the voice mail message.

The Examiner has rejected claims 1-20 under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 6,327,323 to Epstein et al. ("Epstein").

The Epstein *Patent*

Epstein discloses an automated call and data transfer system that processes telephone calls, emails and faxes. The system may be programmed to send a caller's verbal statements to a speaker recognition module, where the statements are compared with previously stored speaker models (Epstein, col. 7, lines 14-27).

The Epstein disclosure provides a fair amount of detail regarding the identification of an unknown caller. As noted by the Examiner in rejecting claims 2 and 9, Epstein describes the use of caller ID (ANI) as one method for identifying a caller for whom no previously stored speaker model exists (Epstein, col. 8, lines 8-14). The Examiner also notes that Epstein uses speech recognition techniques to extract caller identity from the recorded call (col. 7, lines 14-27). Epstein further describes the use of a speech synthesizer module to create a caller prompt asking the caller for identification (col. 7, lines 39-49).

Epstein does not, however, describe the use of the subscriber's input to determine the identity of the caller.

Discussion

Claim 1 has been amended to require that the subscriber provide an identification of an

unknown voice mail message speaker. That limitation had been in claim 2, which was

incorporated into its parent claim 1. Additionally, the term "user" in claims 1 and 3 was replaced

with "voice mail subscriber" to clarify the limitation. The terms are used interchangeably in the

present specification. Claim 1 now requires the step of

> receiving a speaker label *from a voice mail subscriber* for a
> voice mail message tagged as unknown, wherein the
> speaker label is the identity of the speaker of the voice mail
> message.

Claim 13 had contained a limitation wherein creation of speaker models is based, at least in part,

on subscriber identification of callers. That limitation was incorporated into parent claim 11. A

corresponding system limitation was added to system claim 17. Claim 11 now requires the step

of:

> processing speech signals from each of the plurality of
> voice mail messages with one or more speaker models,
> wherein each of the one or more speaker models is created
> from speech signals extracted from previous voice mail
> messages left by the same caller *as identified by the voice*
> *mail subscriber*;

In each claim, the *voice mail subscriber* identifies speech signals in a voice mail message. In

that way, the complexity and uncertainty of the alternative techniques described above is either

avoided or ameliorated.

Epstein, while detailing several techniques for identifying callers to create voice models and identify unknown callers, does not teach or suggest the use of subscriber input for that purpose. The use of subscriber input to identify callers in creating voice models is a significant advance because of the unique position the subscriber is in to reliably and inexpensively identify a caller in a voice mail message.

Because Epstein does not teach all the elements of amended independent claims 1, 11 and 17, Applicants respectfully submit that those claims are patentable over the art cited in the case. Applicants further submit that claims 3-10, 12, 14-16 and 18-20, which depend directly or indirectly from those independent claims, are patentable for the same reasons.

Claim 16 additionally requires receiving a speaker label from a subscriber when no match is found for a specific voice mail message, as in amended claim 1. Applicants submit that claim 16 is patentable for that additional reason.

Conclusion

Applicants therefore respectfully assert that claims 1, 3-12 and 14-20 are now in condition for allowance, and earnestly request that the Examiner issue a Notice of Allowance.

Should the Examiner have any questions regarding the present case, the Examiner should

not hesitate in.contacting the undersigned at the number provided below.

Respectfully,

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